

REMARKS

I. Patentability Arguments

A. The Rejections Under 35 U.S.C. §§ 102(b) and 102(e) Should Be Withdrawn

I. Rejection over US patent 5,858,987 to Beer-Romero

At page 3 of the office action, the Examiner rejected claims 85 and 89 under 35 U.S.C. 102(e) allegedly as being anticipated by US patent 5,858,987 to Beer-Romero et al. (Beer-Romero) because, according to the Examiner, "Beer-Romero teaches topical application to skin cells of a mammal an antisense for inhibiting proliferation of the skin cells in a mammal." To anticipate claim 85 and its dependent claim 89, Beer-Romero must teach each and every element of claim 85.

Claim 85 is directed to a method of inhibiting proliferation of skin cells in a mammal, comprising administering topically to the skin cells an effective amount of a composition selected from the group consisting of deoxynucleotides, DNA dinucleotides, DNA dinucleotide dimers and any of the foregoing combinations thereof.

Beer-Romero does not teach a method utilizing deoxynucleotides, DNA dinucleotides or DNA dinucleotide dimers. Instead, referenced by the Examiner claim 1 of column 31 is directed to an antisense nucleic acid (polymer) selected from an oligonucleotide which is 20-50 nucleotides in length, not a deoxynucleotide or DNA dinucleotide or DNA dinucleotide dimer as claimed in claim 85. More particularly, Beer-Romero teaches a method using either an E6AP specific antisense RNA oligonucleotide or a DNA construct that expresses such an E6AP specific antisense RNA oligonucleotide in a cell.

Because Beer-Romero does not teach methods utilizing a deoxynucleotide or dinucleotide or dinucleotide dimer, Beer-Romero cannot anticipate claims 85 and 89 as the matter of law and therefore, rejection over Beer-Romero under 35 U.S.C. 102(e) can be properly withdrawn, and such withdrawal is respectfully requested.

II. Rejection over US patent 6,103,243 to Russell-Jones.

At page 5 of the Office action, the Examiner rejected claims 57, 58 and 69 under 35 U.S.C. 102 (e) allegedly for being anticipated by US patent 6,103,243 to Russell-Jones et al. ("Russell-Jones") because the limitation "at least [one] said oligonucleotide has an oligonucleotide sequence consisting of SEQ ID NO: 3" reads on an oligonucleotide comprising an oligonucleotide sequence consisting of SEQ ID NO: 3."

For the purpose of clarity, applicants amend claims 57, 58 and 69 with this response so that the amended claims recite the following limitation "wherein the sequence of said oligonucleotide consists of SEQ ID NO: 3." Thus, the amended claims are directed to a composition consisting of oligonucleotide AGTATGA.

At column 24, Russell-Jones discloses a 573 nucleotide-long DNA fragment containing LTB coding sequence. Amino acids 121, 122 and 123 of this 573 nucleotide-long DNA fragment are encoded by sequence AGT ATG AAA. However, Russell-Jones does not disclose an oligonucleotide consisting of the sequence AGTATGA.

In conclusion, because Russell-Jones does not teach a composition consisting of oligonucleotide AGTATGA, Russell-Jones cannot anticipate instant claims 57, 58 and 69 as the matter of law.

III. Rejection over US patent 5,455,029 to Hartman.

At page 5 of the office action, the Examiner rejected claim 69 under 35 U.S.C. 102(e) allegedly as being anticipated by US patent 5,455,029 to Hartman et al. ("Hartman") because "at least [one] said oligonucleotide has an oligonucleotide sequence consisting of SEQ ID NO: 1 or SEQ ID NO: 4" reads on an oligonucleotide comprising an oligonucleotide sequence consisting of SEQ ID NO: 1 or SEQ ID NO: 4." For the purpose of clarity, applicants amend claim 69 with this response as follows: "... wherein the sequence of said oligonucleotide consists of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3 or SEQ ID NO: 4 . . . " Hartman does not disclose a composition consisting of oligonucleotide GAGTATGAG or a composition consisting of oligonucleotide GTATG. The subject matter of Hartman is concerned with construction of expression vectors and sequences for the vector.

In summary, Hartman cannot anticipate the amended claim 69 as the matter of law because Hartman does not disclose a composition consisting oligonucleotide GAGTATGAG or a composition consisting oligonucleotide GTATG.

IV. Rejection over US patent 5,583,016 to Villaponteau.

At page 4 of the office action, the Examiner rejected claim 51 under 35 U.S.C. 102(b) as being anticipated by US patent 5,583,016 to Villeponteau et al. ("Villeponteau") because the limitation "at least [one] said oligonucleotide has an oligonucleotide sequence consisting of SEQ ID NO: 5" reads on an oligonucleotide comprising an oligonucleotide sequence consisting of SEQ ID NO:5." Applicants amend claim 51 with this response as follows: "... wherein the sequence of said oligonucleotide consists of SEQ ID NO: 5 . . ." Applicants submit that the language of the amended claim 51 limits the claim to a composition consisting of oligonucleotide SEQ ID NO: 5 only in 5' to 3' orientation (5'-GTTAGGGTTAG-3').

To anticipate the amended claim 51, Villeponteau must teach a composition consisting of oligonucleotide 5'-GTTAGGGTTAG-3'. Because Villeponteau does not teach a composition consisting of oligonucleotide 5'-GTTAGGGTTAG-3', Villeponteau cannot anticipate amended claim 51 as the matter of law. Therefore, the rejection under 35 U.S.C. 102(b) over Villeponteau can be withdrawn and such withdrawal is requested.

B. The Rejections Under 35 U.S.C. § 103 Should Be Withdrawn

At page 5 of the Office action, the Examiner rejected claims 51 and 52 under 35 U.S.C. 103 as allegedly being obvious over Villeponteau taken with U.S. Patent No. 6,020,138 to Akhavan-Tafti (Akhavan-Tafti).

The Examiner characterized Akhavan-Tafti as teaching synthesizing oligonucleotides having a 5' phosphate and that such oligonucleotides can be simultaneously ligated onto a template bound primer and also teaches uses for such molecules. It also teaches oligonucleotides having a phosphodiester backbone. However, Akhavan-Tafti does nothing to overcome the failure of Villeponteau to teach the claimed sequence.

Since Villeponteau in combination with Akhavan-Tafti fails to teach or suggest the presently claimed composition of claim 51 or 52, the rejections under 35 U.S.C. § 103 should be withdrawn and applicants respectfully request withdrawal.


Conclusion

Applicants respectfully submit that the claims are in condition for allowance and early notification thereof is requested. In the interest of expediting prosecution, if the Examiner has questions or comments he is invited to telephone the undersigned at the indicated telephone number.

Respectfully submitted,

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